

WHAT IS CLAIMED IS:

1. A robot for a production machine, comprising:
  - a rotation drive unit disposed on a support base;
  - a first arm, a proximal end portion of the first arm being fixed to a rotary shaft of the rotation drive unit;
  - a first proximal-side pulley disposed coaxially with the rotary shaft and fixed to the support base;
  - a second proximal-side pulley fixed to a distal end portion of the first arm;
  - an intermediate shaft rotatably supported on the distal end portion of the first arm, the intermediate shaft penetrating a center portion of the second proximal-side pulley;
  - a first distal-side pulley provided integrally with the intermediate shaft;
  - a first rotation transmission section for drivingly connecting the first distal-side pulley and the first proximal-side pulley;
  - a second arm, a proximal end portion of the second arm being fixed to the intermediate shaft;
  - a distal-side shaft rotatably supported on a distal end portion of the second arm;
  - a second distal-side pulley provided integrally with the distal-side shaft;
  - a second rotation transmission section for drivingly connecting the second distal-side pulley and the second proximal-side pulley; and

a chuck fixed to the distal-side shaft, wherein  
the tooth-number ratio between the first proximal-side  
pulley and the first distal-side pulley is set to  $n:1$ ; and  
the tooth-number ratio between the second proximal-side  
pulley and the second distal-side pulley is set to  $1:m$ .

2. A robot for a production machine according to claim  
1, wherein the tooth-number ratio between the first proximal-  
side pulley and the first distal-side pulley is set to  $2:1$ .

3. A robot for a production machine according to claim  
1, wherein the tooth-number ratio between the second  
proximal-side pulley and the second distal-side pulley is set  
to  $1:2$ .

4. A robot for a production machine according to claim  
1, wherein the distance between the center of the second  
proximal-side pulley and the center of the second distal-side  
pulley is set to be equal to the distance between the center  
of the first proximal-side pulley and the center of the first  
distal-side pulley.

5. A robot for a production machine according to claim  
1, wherein the support base is disposed on a bed of an  
injection molding machine; and the chuck is moved through a  
space between the upper and lower tie bars.

6. A robot for a production machine according to claim 5, wherein the support base is supported by a movement mechanism for effecting movement in the front/back direction of the injection molding machine.

7. A robot for a production machine according to claim 1, wherein a rotation mechanism is disposed at the upper end of an injection molding machine, the rotation mechanism including a horizontal arm whose one end is supported to be rotatable about an axis extending in the vertical direction; the support base is attached to the other end of the horizontal arm; and the chuck is moved through a space between tie bars disposed at two different positions in the transverse direction of the injection molding machine.

8. A robot for a production machine according to claim 7, wherein the rotation mechanism is supported by a movement mechanism for effecting movement in the front/back direction of the injection molding machine.